



# TrimTrac

Vehicle Monitoring, Security, and Recovery



## The TrimTrac Vehicle Locator

### Key Features

Complete, low-cost, end-user device in water-resistant housing

No external wires or antennas for battery-powered operation; permits easy installation

Small size allows discrete placement

Tri-band GSM 1900 MHz (PCS) and 900/1800 MHz (DCS) for worldwide coverage

Short Message Service (SMS) for cost-effective wireless communications

Enhanced sensitivity for indoor and outdoor position reports

Battery-powered or vehicle-powered

Optional Vehicle Adapter Module extends protection and service offerings

90-day operation typical on four AA batteries



Until now, personal vehicle tracking has been an expensive service, within the means of only a small percentage of customers. The TrimTrac™ locator changes all that. As the world's first truly affordable and highly reliable mobile tracking device, it offers application service providers and systems integrators the opportunity to provide vehicle monitoring, security and recovery services, and a host of other services, to a broader number of subscribers.

The TrimTrac locator can be connected to on-board vehicle systems and devices to add value to existing services, and new applications can be rapidly developed to expand the types of services available to subscribers.

The device enables automatic and autonomous periodic position reporting and cost-effective wireless communications for personal vehicle monitoring and security, and stolen vehicle recovery. It can also support select roadside assistance and concierge services with application server and call center capabilities provided by third-party service providers.

### Compact and Affordable

A completely self-contained end-user device, the TrimTrac locator is the size of a white board eraser and weighs 3.6 ounces without batteries. It is encased in a durable, lightweight, water-resistant housing. Internally, a GPS receiver and GSM modem are integrated onto a single board and are controlled by a common microprocessor. The unparalleled level of integration, unique to the unit, enhances functionality and reliability, and enables the device's small footprint and low cost. The TrimTrac locator periodically transmits position reports, pre-set at 15-minute intervals while in motion, which promotes power efficiency and dramatically reduces an application's communications costs. The device can be signaled to alter reporting frequency according to application or end-user requirements.

### Less Cost, More Discrete

The TrimTrac locator can be instantly placed inside a vehicle's passenger glove compartment or under the seat. As a self-contained, battery-powered unit that has no external connections or antennas, it eliminates the need for time-consuming and expensive installations associated with many other tracking devices.

The enhanced GPS sensitivity of the TrimTrac locator permits the device's placement in areas where conventional GPS may not work. It can be easily concealed inside a vehicle to prevent tampering or unauthorized removal, yet still be removed quickly because it has no external attachments.

### Broad and Reliable Coverage

The TrimTrac locator is founded upon established technologies: GPS, which is truly global in nature, and GSM, which is the foremost wireless communications technology with the largest geographical coverage and the greatest number of subscribers.

The TrimTrac locator offers not only world-class automotive-grade GPS performance, but employs an enhanced GPS sensitivity mode that allows limited operation indoors and in places where traditional GPS receivers will not work. It also supports the three major GSM frequency bands, specifically 900/1800 MHz (DCS) worldwide and 1900 MHz (PCS) in the United States, where GSM coverage is comparable to other leading digital wireless standards.

### **Cost-effective and Secure Transmissions**

Periodic position reports are sent as SMS (short message service) text messages over the GSM network, thereby providing secure and low-cost data transmission, while optimizing the battery life of the TrimTrac device.

### **Power Options Deliver Extended Performance**

The TrimTrac locator can operate for up to 90 days on a set of four AA batteries during normal use with good GPS visibility. An easily removable battery pack provides simple and low-cost maintenance and operation.

For applications requiring more frequent position reports or other communications than can be adequately supported with batteries, the device can be connected to external power by using the optional Vehicle Adapter Module.

### **Vehicle Adapter Module Expands Capabilities**

The Vehicle Adapter Module is a plug-in module that replaces the standard battery pack to enable the TrimTrac locator to operate off vehicle power, more suitable for permanent installations. It includes a standby, rechargeable battery for continued position reporting even if vehicle power is disconnected. In the event of a vehicle theft, where disconnecting the vehicle's main battery often silences car alarms, the device provides an extra measure of protection by quickly sending a status message and continuing to report position.


The Vehicle Adapter Module also allows the TrimTrac locator to monitor up to two external binary switch inputs, greatly expanding the number of applications that service providers can offer. For example, it can monitor other on-board systems and devices, such as car alarms and driver-operated switches, to report status and modify its operation. The additional security measures may include, but are not limited to, automatic notification and frequent position reporting in the event that a car alarm is armed or triggered, vehicle power is disconnected, or the driver activates a switch.

### **Modularity**

The device's modular architecture allows for rapid development of new applications. Future generations of the device will include a variety of plug-in modules, provided by either Trimble or its partners, for added functionality.

### **Unmatched Service and Support**

As the world's leader in GPS technology since 1978, Trimble has an established worldwide presence. We are dedicated to providing systems integrators and service providers with 24/7 service and top-notch support in the form of training, application development and customization for the TrimTrac locator.

For more information on TrimTrac, visit us at [www.trimtrac.com](http://www.trimtrac.com) 

Applications the TrimTrac locator supports:

### **Safety/Security Enhancement**

Stolen Vehicle Recovery

Personal Vehicle Monitoring:  
speed reporting, track logging,  
geo-fencing

Emergency Services

Accident Assistance

### **Fleet Management**

Delivery Services

Vehicle Tracking

Dispatch

# Product Information

## Key Features

Complete packaged end-user device  
No external connections or antennas  
GSM 900/1800 MHz (DCS) and 1900 MHz (PCS)  
Indoor and outdoor position reports via SMS  
Battery-powered or connect to vehicle power

## GSM Specifications

GSM	Normal MS-SMS data only
900/1800/1900	Class 4 (2W) at 900 MHz (EGSM) Class 1 (1W) at 1800 MHz (GSM 1800) and 1900 MHz (GSM 1900 PCS)
SIM	1.8V/3V
Type Approvals	FCC Part 15, FCC Part 24 Industry Canada CE MARK ECR & TTE Type Examination

## GPS Specifications

General	L1 (1575.42 MHz) frequency, C/A code 12-Channels, 48 Correlators
Sensitivity	Minimum -136.0 dBm Acquisition without external assistance
Accuracy	Horizontal <6 meters (50%) Altitude <11 meters (50%) Velocity 0.06 m/sec
Acquisition	Signal Power -130.0 dB -136.0 dB Hot Start (50%) <24 sec Warm Start (50%) <38 sec <400 sec Cold Start (50%) <90 sec
Dynamics	Acceleration 4g (39.2 m/sec <sup>2</sup> ) Motional jerk 20 m/sec <sup>3</sup>
Datum	WGS-84

## Environmental Specifications

Temperature	Operating -10°C to +55°C
Humidity	5% to 95% RH non-condensing at +40°C
Casing	Wind-driven rain and dust-resistant per IP 54 standard when used with batteries
Vibration*	0.008 g <sup>2</sup> /Hz 5 Hz to 20 Hz 0.05 g <sup>2</sup> /Hz 20 Hz to 100 Hz -3 dB/octave 100 Hz to 900 Hz
Shock*	Operational 40g for 11 milliseconds Non-operational 75g for 6 milliseconds

## Physical Specifications

Assembly	Injection molded plastic with integrated battery pack
Size	133 mm x 64 mm x 25 mm 5.25" x 2.5" x 1.0"
Weight	102 grams (3.6 oz) not including batteries

## Electrical Characteristics

Primary Power	Four AA batteries (not included)
Battery Life	Up to 90 days, typical up to 10 position reports per day
Connectors	None, except as provided by selected battery-pack eliminator modules

## Ordering Information and Accessories

TrimTrac Locator Unit	Included basic unit, battery pack for four AA batteries and/or Vehicle Adapter
Vehicle Adapter	Replaces standard battery-pack and allows connection to an external 9-32 VDC power supply and two switched inputs. Includes rechargeable battery to allow limited operation after loss of external power
Provisioning Kit	Provisioning Module used to commission TrimTrac prior to initial use. Includes Manual CD-ROM, USB A-A data cable for connection to USB port on PC
User Manual	User Manual CD-ROM. Intended to be used by systems integrators and solution providers for application development, commissioning and troubleshooting
Starter Kit	Complete kit consisting of one each of all of the above

## Customer Supplied Items

- Active SIM card, SMS enabled
- Four alkaline AA batteries

## For More Information

- Contact your Component Technologies representative
- Visit [www.trimtrac.com](http://www.trimtrac.com)
- Call 877-876-8722

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